

In re Simesen et al.
Application No. 10/664,775

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AMENDMENTS TO THE CLAIMS

The following Listing of Claims replaces all prior versions, and listings, of claims.

LISTING OF CLAIMS

1-2 (cancelled)

3. (currently amended) The method of claim 16 ~~1~~, wherein the at least one S/MAR element comprises ~~(i) SEQ ID NO:1 or SEQ ID NO:2, (ii) a functional fragment of SEQ ID NO:1 or SEQ ID NO:2, or (iii) a sequence that is at least about 70% homologous to SEQ ID NO:1 or SEQ ID NO:2~~ protein is Factor VII or a Factor VII-related polypeptide.

4. (currently amended) The method of claim 3 ~~2~~, wherein the nucleic acid molecule comprises the two S/MAR elements are selected from (i) SEQ ID NO:1 or SEQ ID NO:2, (ii) functional fragments of SEQ ID NO:1 or SEQ ID NO:2, and ~~or~~ (iii) sequences that are at least about 70% identical ~~homologous~~ to SEQ ID NO:1 or SEQ ID NO:2.

5. (currently amended) The method of claim 4 ~~2~~, wherein the two S/MAR elements are identical.

6. (original) The method of claim 5, wherein the identical S/MAR elements comprise SEQ ID NO:1.

7. (original) The method of claim 5, wherein the identical S/MAR elements comprise SEQ ID NO:2.

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8. (original) The method of claim 5, wherein the identical S/MAR elements comprise SEQ ID NO:3.
9. (original) The method of claim 5, wherein the identical S/MAR elements comprise SEQ ID NO:4.
10. (original) The method of claim 5, wherein the identical S/MAR elements comprise SEQ ID NO:5.
11. (currently amended) The method of claim ~~4~~ 2, wherein the two S/MAR elements comprise SEQ ID NO:1 and SEQ ID NO:2, respectively.
12. (currently amended) The method of claim ~~4~~ 2, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:3, respectively.
13. (currently amended) The method of claim ~~4~~ 2, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:4, respectively.
14. (currently amended) The method of claim ~~4~~ 2, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:5, respectively.
15. (currently amended) The method of claim ~~3~~ 1, wherein the at least one S/MAR element is located less than about 10 kb from the Factor VII or Factor VII-related polypeptide-encoding sequence.
16. (currently amended) A method for producing a ~~polypeptide or~~ protein comprising (a) transfecting a mammalian cell with a nucleic acid molecule comprising a (I) a sequence encoding the ~~polypeptide or~~ protein and (II) at least one scaffold/matrix attachment region (S/MAR) element comprising (i) SEQ ID NO:1 or

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SEQ ID NO:2, (ii) a functional fragment of SEQ ID NO:1 or SEQ ID NO:2, or (iii) a sequence that is at least about 70% ~~homologous~~ identical to SEQ ID NO:1 or SEQ ID NO:2; (b) culturing the transfected cell under conditions suitable for expression of the polypeptide or protein; and (c) isolating the expressed polypeptide or protein.

17. (original) The method of claim 16, wherein the nucleic acid molecule comprises two S/MAR elements.

18. (original) The method of claim 17, wherein the two S/MAR elements are identical.

19. (original) The method of claim 18, wherein the identical S/MAR elements comprise SEQ ID NO:1.

20. (original) The method of claim 18, wherein the identical S/MAR elements comprise SEQ ID NO:2.

21. (original) The method of claim 18, wherein the identical S/MAR elements comprise SEQ ID NO:3.

22. (original) The method of claim 18, wherein the identical S/MAR elements comprise SEQ ID NO:4.

23. (original) The method of claim 18, wherein the identical S/MAR elements comprise SEQ ID NO:5.

24. (original) The method of claim 17, wherein the two S/MAR elements comprise SEQ ID NO:1 and SEQ ID NO:2, respectively.

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25. (original) The method of claim 17, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:3, respectively.

26. (original) The method of claim 17, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:4, respectively.

27. (original) The method of claim 17, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:5, respectively.

28. (original) An isolated DNA molecule comprising one or more S/MAR elements that comprise a sequence selected from the group consisting of SEQ ID NOs:1-5.

29. (original) The isolated DNA molecule of claim 28, wherein the DNA molecule comprises a sequence encoding a human protein or polypeptide or a functional analogue of a human protein or polypeptide.

30. (original) The isolated DNA molecule of claim 29, wherein the protein or polypeptide-encoding sequence is located less than about 10 kb from the one or more S/MAR elements.

31. (original) The isolated DNA molecule of claim 30, wherein the isolated DNA molecule comprises SEQ ID NO:1.

32. (original) The isolated DNA molecule of claim 30, wherein the isolated DNA molecule comprises SEQ ID NO:2.

33. (original) The isolated DNA molecule of claim 30, wherein the isolated DNA molecule comprises SEQ ID NO:3.

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34. (original) The isolated DNA molecule of claim 30, wherein the isolated DNA molecule comprises SEQ ID NO:4.

35. (original) The isolated DNA molecule of claim 30, wherein the isolated DNA molecule comprises SEQ ID NO:5.

36. (currently amended) A vector construct comprising a nucleic acid molecule comprising (a) a sequence encoding Factor VII or a Factor VII-related polypeptide operably linked to one or more expression control elements and (b) one or more S/MAR elements selected from SEQ ID NOs:1-5.

37. Cancelled

38. (currently amended) A mammalian cell comprising the vector of claim 36 37.

39. (original) A vector construct comprising a nucleic acid molecule that comprises (a) a sequence encoding a polypeptide or protein operably linked to one or more expression control elements and (b) at least one S/MAR element comprising a sequence selected from SEQ ID NOs:1-5.

40. (original) A mammalian cell comprising the vector of claim 39.

41. (original) An isolated DNA molecule consisting essentially of one or more sequences selected from SEQ ID NOs:1-5.